

# Chapter 10 Test, Form 2A

SCORE \_\_\_\_\_

Write the letter for the correct answer in the blank at the right of each question.

For Questions 1-3, use  $\odot O$ .

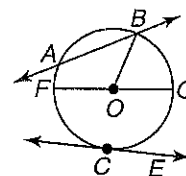
1. Name a diameter.

A.  $\overline{FG}$

C.  $\overline{AB}$

B.  $\overline{AB}$

D.  $\overline{CE}$



1. \_\_\_\_\_

2. Name a chord.

A.  $\overline{FO}$

B.  $\overline{AB}$

C.  $\overline{AB}$

D.  $\overline{CE}$

2. \_\_\_\_\_

3. Name a secant.

A.  $\overline{FO}$

B.  $\overline{AB}$

C.  $\overline{AB}$

D.  $\overline{CE}$

3. \_\_\_\_\_

4. If the diameter of a circle is 10 inches, find the circumference to the nearest hundredth.

A. 15.71 in.

B. 31.42 in.

C. 62.83 in.

D. 314.16 in.

4. \_\_\_\_\_

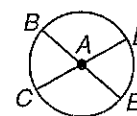
5. If  $m\angle BAD = 110$  in  $\odot A$ , find  $m\widehat{DE}$ .

A. 35

B. 55

C. 70

D. 110



5. \_\_\_\_\_

6. Points X and Y lie on  $\odot P$  so that  $PX = 5$  meters and  $m\angle XPY = 90$ . Find the length of  $\widehat{XY}$  to the nearest hundredth.

A. 3.93 m

B. 7.85 m

C. 15.71 m

D. 19.63 m

6. \_\_\_\_\_

7. Chords  $\overline{XY}$  and  $\overline{WV}$  are equidistant from the center of  $\odot O$ . If  $XY = 2x + 30$  and  $WV = 5x - 12$ , find  $x$ .

A. 58

B. 28

C. 14

D. 6

7. \_\_\_\_\_

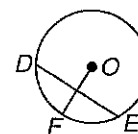
8. Find the radius of  $\odot O$  if  $DE = 12$  inches and  $\overline{DE}$  bisects  $\overline{OF}$ .

A.  $2\sqrt{3}$  in.

B. 6 in.

C. 8 in.

D.  $4\sqrt{3}$  in.



8. \_\_\_\_\_

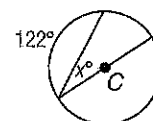
9. Find  $x$ .

A. 122

B. 61

C. 58

D. 29



9. \_\_\_\_\_

10.  $EFGH$  is a quadrilateral inscribed in  $\odot P$  with  $m\angle E = 72$  and  $m\angle F = 49$ . Find  $m\angle H$ .

A. 131

B. 108

C. 90

D. 57

10. \_\_\_\_\_

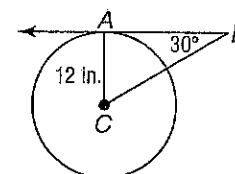
11. If  $\overline{AB}$  is tangent to  $\odot C$  at A, find  $BC$ .

A. 6 in.

B.  $4\sqrt{3}$  in.

C.  $12\sqrt{3}$  in.

D. 24 in.



11. \_\_\_\_\_



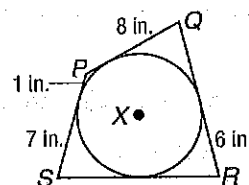
## 10

## Chapter 10 Test, Form 2A (continued)

- 12.
- $\overline{PQ}$
- ,
- $\overline{QR}$
- ,
- $\overline{RS}$
- , and
- $\overline{SP}$
- are tangent to
- $\odot X$
- . Find
- $RS$
- .

A. 9 in.  
C. 13 in.

B. 12 in.  
D. cannot tell



12. \_\_\_\_\_

13.  $\odot A$  has its center at  $A(3, 2)$ , and  $\overline{CB}$  is tangent to  $\odot A$  at  $B(6, 4)$ . Find the slope of  $\overline{CB}$ .

A. 1

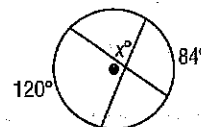
B.  $\frac{1}{2}$ C.  $-\frac{3}{2}$ D.  $-\frac{1}{2}$ 

13. \_\_\_\_\_

14. Find
- $x$
- .

A. 78  
C. 102

B. 90  
D. 156

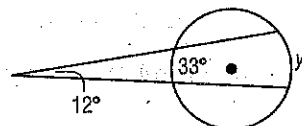


14. \_\_\_\_\_

15. Find
- $y$
- .

A. 66  
C. 45

B. 57  
D. 21

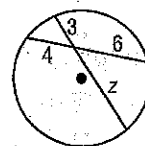


15. \_\_\_\_\_

16. Find
- $z$
- .

A. 2  
C. 7

B. 4.5  
D. 8

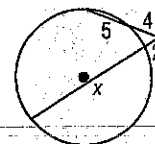


16. \_\_\_\_\_

17. Find
- $x$
- .

A. 4  
C. 22

B. 16  
D. 32



17. \_\_\_\_\_

18. Find the center of the circle whose equation is
- $(x + 11)^2 + (y - 7)^2 = 121$
- .

A.  $(-11, 7)$ B.  $(11, -7)$ C.  $(121, 49)$ 

D. 11

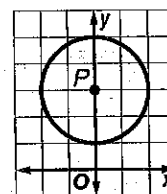
18. \_\_\_\_\_

19. Find the equation of a circle whose center is at
- $(2, 3)$
- and radius is 6.

A.  $(x + 2)^2 + (y + 3)^2 = 6$ B.  $(x - 2)^2 + (y - 3)^2 = 6$ C.  $(x + 2)^2 + (y + 3)^2 = 36$ D.  $(x - 2)^2 + (y - 3)^2 = 36$ 

19. \_\_\_\_\_

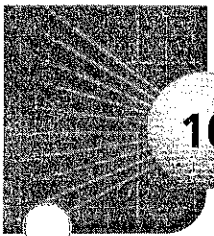
20. Find the equation of
- $\odot P$
- .

A.  $x^2 + (y - 3)^2 = 4$ B.  $x^2 + (y - 3)^2 = 2$ C.  $(x - 3)^2 + y^2 = 2$ D.  $(x - 3)^2 + y^2 = 4$ 

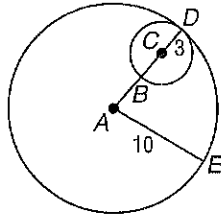
20. \_\_\_\_\_

- Bonus** A chord of the circle whose equation is  $x^2 + y^2 = 57$  is tangent to the circle whose equation is  $x^2 + y^2 = 32$  at the point  $(4, -4)$ . Find the length of the chord.

B: \_\_\_\_\_



1. Find
- $AB$
- .

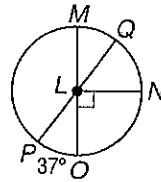


1. \_\_\_\_\_

2. Find the diameter and the circumference of a circle whose radius is 11 inches, to the nearest hundredth.

2. \_\_\_\_\_

3. In
- $\odot L$
- ,
- $m\angle QLN = 2x - 5$
- . Find
- $x$
- .



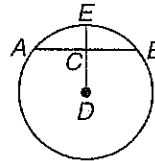
3. \_\_\_\_\_

4. The radius of
- $\odot C$
- is 16 units long. Find the length of an arc that has a measure of 270 to the nearest hundredth.

4. \_\_\_\_\_

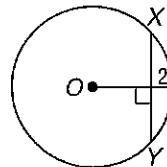
5. If
- $\overline{DE}$
- bisects
- $\overline{AB}$
- , what is the measure of
- $\angle BCE$
- ?

5. \_\_\_\_\_



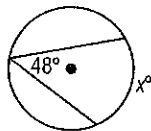
6. Find the radius of
- $\odot O$
- if
- $XY = 10$
- .

6. \_\_\_\_\_



7. Find
- $x$
- .

7. \_\_\_\_\_



8. Regular nonagon
- $ABCDEFGHI$
- is inscribed in a circle. Find
- $m\widehat{AC}$
- .

8. \_\_\_\_\_

- ~~9.~~
- $\overline{EF}$
- is tangent to circle
- $P$
- at
- $G(3, 6)$
- . If the slope of
- $\overline{EF}$
- is
- $\frac{5}{3}$
- , what is the slope of
- $\overline{GP}$
- ?

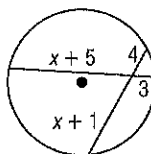
9. \_\_\_\_\_

- ~~10.~~
- $\triangle GHI$
- is circumscribed about
- $\odot K$
- with
- $GH = 20$
- units,
- $HI = 14$
- units, and
- $IG = 12$
- units. Find the length of each segment whose endpoints are
- $G$
- and the points of tangency on
- $\overline{GH}$
- and
- $\overline{GI}$
- .

10. \_\_\_\_\_

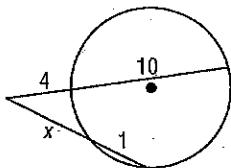
- ~~11.~~
- Find
- $x$
- .

11. \_\_\_\_\_



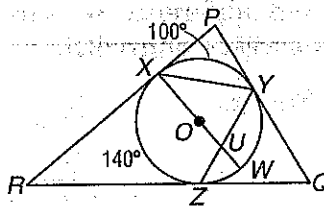
## 10

## Chapter 10 Test, Form 2D (continued)

~~12.~~ Find  $x$ .

12. \_\_\_\_\_

For Questions 13–16, use  $\odot O$  with  $\triangle PQR$  circumscribed.

13. Find  $m\angle PQR$ .14. Find  $m\angle XYZ$ .15. Find  $m\angle PYX$ .16. Find  $m\angle XUZ$ .

13. \_\_\_\_\_

14. \_\_\_\_\_

15. \_\_\_\_\_

16. \_\_\_\_\_

~~17.~~ Write the equation of the circle whose center is at  $(-7, 8)$  and radius is 9.

17. \_\_\_\_\_

~~18.~~ Write the equation of the circle containing the point at  $(8, 1)$  whose center is at  $(4, -9)$ .

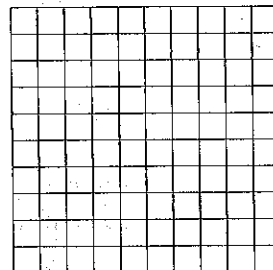
18. \_\_\_\_\_

~~19.~~ Find the radius of a circle whose equation is  $(x + 3)^2 + (y - 2)^2 = r^2$  and contains  $(0, 8)$ .

19. \_\_\_\_\_

~~20.~~ Graph  $(x - 3)^2 + (y + 1)^2 = 25$ .

20. \_\_\_\_\_



~~Bonus~~ Find the coordinates of the point(s) of intersection of the circles whose equations are  $(x - 2)^2 + y^2 = 13$  and  $(x + 3)^2 + y^2 = 8$ .

B: \_\_\_\_\_